

**Abstract**

The present invention provides methods and compositions for isolating a nucleic acid molecule fragment comprising at least a portion of a gene, comprising: stimulating at  
5 least one cell or at least one nucleus with radiation; cross-linking at least one transcription factor to a nucleic acid molecule in said at least one cell or at least one nucleus with formaldehyde, forming at least one transcription factor-nucleic acid molecule complex; fragmenting said nucleic acid molecule to form at least one transcription factor-nucleic acid molecule fragment complex; and isolating the nucleic acid molecule fragment from  
10 said at least one transcription factor-nucleic acid molecule fragment complex to form at least one isolated nucleic acid molecule fragment; wherein said at least one isolated nucleic acid molecule fragment comprises at least a portion of the first exon of a gene whose expression is modulated by said transcription factor; further wherein said at least one isolated nucleic acid molecule fragment comprises at least one transcription factor  
15 binding site that is operably linked or in close proximity to said first exon of a gene.